The 1970s and Early 1980s: Enabling a Military Offset?

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Abstract

Looking at past “offsets”—gaining an advantage over an adversary—might provide insight to the institutional Army on how to develop and implement a Third Offset. Although an examination of history may not point to the answer for the Third Offset, it may bring to light the factors that made past offsets successful and offer a model that leaders can use as they wade through the options. Coming out of the Vietnam War, the Chief of Staff of the Army and the U.S. Army Training and Doctrine Command (TRADOC) commanders recognized that the Army needed to change, used the 1970s to develop that change, and then was able to integrate its technology investments/acquisitions to complement new doctrine. Although there was a Department of Defense effort to use technology as a force multiplier to offset the Soviets, senior leaders had already realized this need by the time Secretary Harold Brown and Undersecretary Perry undertook technology investments in the late 1970s. The Army was able to complement Brown and Perry’s effort due to doctrinal changes and investments already made. TRADOC worked to understand how its technology/acquisition investments complemented its operational concepts and doctrine and to ensure that these investments would prove successful in meeting the threat. There was a role to play both for concepts (devised to meet the strategic environment) and technology/acquisition innovation in the Second Offset.

Chapter 1 – Introduction

Background

On November 15, 2014, at the Reagan Presidential Library, Secretary of Defense Chuck Hagel delivered a speech in which he discussed the future focus of the Department of Defense (DoD) and the Third Offset. Hagel (2014b) discussed the current transition of the DoD and the "historic realignment of interests and influences around the world" (para. 7). Hagel said that the United States needed to invest in technology in order to outpace its adversary's military and technological capabilities. In his speech, Hagel specifically mentioned Russia and China's military modernization in the areas of missiles, electronic warfare, cyber, and others. Hagel (2014b) continued in his speech to discuss past success in investing for innovation:

> In the 1950s, President Eisenhower successfully offset the Soviet Union's conventional superiority through his New Look build-up of America's nuclear deterrent. In the 1970s, Secretary of Defense Harold Brown, working closely with Undersecretary-and future Defense Secretary-Bill Perry, shepherded their own offset strategy, establishing the Long-Range Research and Development Planning Program that helped develop and feed revolutionary new systems, such as extended-range precision-guided munitions, stealth aircraft, and new intelligence, surveillance, and reconnaissance platforms. (para. 24)
>
> All these systems drew upon technology development, such as the micro-processing revolution, that had unfolded over the course of a few decades. The critical innovation was to apply and combine these new systems and technologies with the new strategic operational concepts, in ways that enabled the American military to avoid matching an adversary 'tank-for-tank or soldier-for-soldier.' (para. 25)

According to Hagel (2014b), “critical” to success of past offsets was the linking of technology to “new strategic operational concepts” (para. 25).

The Defense Innovation Initiative was formally established in policy by Hagel’s (2014a) memorandum on the subject, also released on November 15, 2014. For the acquisition community, Hagel’s memo stated that the DoD would need to be creative, focus on new capabilities, and increase efficiency in development and fielding. The Hagel memorandum further stated that the DoD must remain active to continue to ensure its military-technological superiority. It is important to note, however, that Hagel’s (2014a) memorandum also stresses that “operational concepts will explore how to employ resources to greater strategic effect and deal with emerging threats in more innovative ways” (para. 6).

For the purposes of this paper, the author has adopted then DoD Assistant Secretary of Defense for Research and Engineering Stephen Welby’s (2016) definition of an offset strategy:

> An offset strategy is an approach to military competition that seeks to asymmetrically compensate for a disadvantaged position. Rather than competing head to head in an area where a potential adversary may also possess significant strength, an offset strategy seeks to shift the axis of competition, through the introduction of new operational concepts and technologies, toward one in which the US has a significant and sustainable advantage. A successful offset strategy devalues an adversary’s current advantages and imposes costs to react to US efforts and help establish a long-term competitive advantage for US forces. (p. 3)

Problem Statement

Chief of Staff of the Army (CSA) Milley does not yet know the direction that the Army should take with the Third Offset. Therefore, he wants leaders to figure out how to approach the

Third Offset. The CSA wants to ensure that the Army makes the right decisions as it develops its Third Offset Strategy.

Purpose of This Study

Looking at past "offsets" might garner insight to the generating force on how to develop and implement a Third Offset. Hagel (2014b) said that Defense Innovation Initiative would "draw on the lessons of previous offset strategies" (para. 28). Secretary Hagel (2014a) was more explicit in his implementing memorandum:

> History is instructive on this 21st Century challenge. The U.S. changed the security landscape in the 1970s and the 1980s with networked precision, strike, stealth, and surveillance for conventional forces. We will identify a third offset strategy that puts the competitive advantage firmly in the hands of American power projection over the coming decades. (para. 5)

Although an examination of history may not point to the answer for the Third Offset, it may bring to light the factors that made past offsets successful and furnish a model that leaders can use as they wade through the options. Studying the Army's history will allow today's decision makers to put in context the Army's action taken during the era of the Second Offset. This history might point to the level of success in implementing past offsets and highlight the critical factors that influenced success or failure. Studying critical factors and the context of past decisions may provide a frame of reference as the Army struggles to define its role in the Third Offset.

A key aspect of this paper is the definition of the Second Offset. The common view is the Second Offset was instituted by Defense Secretary Harold Brown and was championed by Undersecretary of Defense William Perry during the presidency of Jimmy Carter. The Second

Offset, defined in retrospect, is commonly seen as investments in technology. For the purpose of this paper, the author has expanded the scope to consider the Army's evolution during the 1970s and into the early 1980s so the study can consider all possible enablers of an "offset." Although the Second Offset is said to have occurred during the Carter administration, the Army took key actions before this time in order to overcome the advantages of the Soviets. These actions must be considered in order to understand the history of the actual offset in this era. This paper assumes that the Army's offset efforts were enabled by those activities it took to meet the Soviet threat in Europe starting in the 1970s.

Significance of This Research

Intellectual capital is being spent to understand what the Third Offset means for the U.S. armed forces and how to achieve Hagel's objectives. The Army War College is dedicating an Academic Year 2016-2017 seminar in order to try to define the Army's focus for the Third Offset. In establishing this seminar, the CSA hopes to peer into the future to ensure that the Army is on the right track.

Looking at the past might also help illustrate lessons from past offset strategies and their critical success factors. This paper attempts to help inform the Army's actions with regard to the Third Offset.

Overview of the Research Methodology

This study looked at the Army's experience in executing the Second Offset Strategy primarily through the lens of the CSA and the U.S. Army Training and Doctrine Command (TRADOC). The research methodology took a historiographical approach to studying the execution of the Second Offset and attempted to draw out key factors of that offset. Historical evidence was collected from online archives, library research databases, and government Web

sites. The evidence for this study consisted of primary sources and secondary sources including government reports, memorandums, letters, scholarly books, scholarly journals, and other articles in the literature. Secondary sources were analyzed, synthesized, and evaluated against primary sources to show a picture of key actions taken to enable the Second Offset. This reconstruction was interpreted to answer the general research question.

The research question was: How were the Army's technology investments and acquisition plans linked to the success of the Army's Second Offset Strategy, and what resulting historical lessons can inform the Third Offset Strategy? This paper tried to determine the relative importance of strategy, operational concepts, and technology and acquisition investments. The answer may help inform the current Third Offset Strategy by highlighting key factors from the Second Offset. Along the way, this paper touched on whether TRADOC clearly linked operational concepts and investments with the future strategic environment during the Second Offset.

The hypotheses for this paper is the senior Army leaders had a clear understanding of the likely strategic environment that enabled them to develop an operational concept with associated doctrine and to make complementary technology and acquisition investments. The hypothesis assumes that, during the 1970s, senior leaders had a clear strategic goal of overcoming/offsetting the Soviets conventional strength in Europe. The hypothesis also postulates that Army leaders recognized that the Army posture needed to change as it came out of the Vietnam War and as it learned the lessons of the 1973 Yom Kippur War in the Middle East. The CSA dedicated intellectual capital through the efforts of TRADOC to think through the change that was needed to meet the threat. Deliberate thought went into strategic aims, operational concepts

development, and technology/acquisition investments to meet the Army's need in Europe. The historical context of the Army's change was used to test this hypotheses.

Limitations

One limitation of this study is that personal interviews of participants were not conducted. In addition, research was limited to open sources available to the public. Further, the research was limited to open archives and Web sites that were available on the internet and in research library databases. Time did not allow the researcher to travel to National Archives sites or Department of Defense archives/historical centers. A significant limitation is that this study relies primarily on secondary sources as opposed to primary sources. Time and expense did not allow the author to undertake archival research.

Chapter 2 – Literature Review

This literature review focused on the Army's evolution during the 1970s and into the 1980s, including the Revolution in Military Affairs (RMA), the strategic environment from this time period, lessons from the Yom Kippur War, the evolution in doctrine, and technology/acquisition investments.

Although primary sources and secondary sources were both used in this study, the literature review focused on the secondary literature. Primary sources are discussed in greater detail in Chapters 4 and 5 and include DoD annual reports, memorandums, and studies, as well as letters and speeches by DoD decision makers.

The secondary literature describes some of the actions taken in terms of an RMA. Adamsky (2008) argues the RMA started with American-Soviet competition in Europe in the 1970s. Palmer (2014) agrees with this assessment:

> An unintended by-product of this intellectual linkage between the Soviet [Military-Technical Revolution] and the emerging American RMA that was revealed during the 1991 *Desert Storm* [*sic*] campaign has been the displacement, in Cold War historiography, of the transformational centre [*sic*] of gravity of the NATO-Warsaw Pact interactive competition from the mid-1970s towards the mid-1980s…The conceptual and temporal tilt towards the 1980s, however, masks the fact that the real RMA pivot of the NATO-Warsaw Pact competition happened a decade earlier. (p. 534)

As described by Palmer, an RMA includes technology advances along with innovative operational concepts. Based on both Adamsky and Palmer, the Army was involved in an RMA and responding to the Soviet challenge in Europe by the mid-1970s.

Coming out of the Vietnam War, Army leaders recognized that change was required. As described by Lock-Pullan (2003), the Army was involved in an inward look. Lock-Pullan's discusses how leaders attempted to learn the lessons of the Vietnam War. More interestingly, he describes how "the Army turned its attention back to Europe, which became its main focus of reform" (p. 486). His article noted how the Army was not prepared for war and the challenges it would face in Europe. Lock-Pullan (2003) describes CSA Abrams' attempt to understand the proper strategic environment for the Army through his commission of *The Astarita Report*. Lock-Pullan wrote that *The Astarita Report* "shows the consistency of the Army's strategic thinking shifting back to a conventional main force Army focused on deterring the Warsaw Pact in Europe" (Lock-Pullan, 2003, pp. 487–489). Lock-Pullan's discussion on the re-orientation to Europe shows that TRADOC was investing the intellectual capital to visualize its enemy in Europe and that TRADOC used doctrine and training to give focus to the reforms and that these doctrinal developments would culminate with the AirLand Battle introduced in the early 1980s. Lock-Pullan clearly outlines this history.

Bronfeld (2007) describes how the Yom Kippur War shaped TRADOC's view of the future fight in Europe and what it would need to do to adapt to this future in a competition with the Soviets. The commanding general (CG) of TRADOC, William DePuy, was a key proponent of doctrinal change informed by the lessons of the Yom Kippur War (Bronfeld, 2007). During DePuy's tenure as TRADOC CG, TRADOC intensively studied the effects of the Yom Kippur War and what it meant for the force. DePuy led the effort to update doctrine, and this war reinforced the need for new weapon systems (Bronfeld, 2007). It is Bronfeld's (2007) contention, however, that the Yom Kippur War was a validation of already conceived ideas that Abrams and DePuy held about the need for change. When Donn Starry took over as CG of TRADOC in

1977, he also used the lessons of the Yom Kippur War to inform operational concepts and doctrine that would be needed in a war in Europe (Bronfeld, 2007).

Lock-Pullan (2003) also noted the importance of the Yom Kippur War for the development of new operational concepts. Discussing the development of FM 100-5, which was issued under DePuy in 1976, Lock-Pullan (2003) wrote, "The 1973 war provided the U.S. Army with a measure for its professional focus, gave guidance for its development in weaponry and tactics, and helped concentrate it on the nature of the threat in Europe" (p. 500). Both Lock-Pullan and Bronfeld (2007) discussed the technology investments and materiel solutions that were required to meet the new challenge in Europe. For DePuy, technology was a key consideration in FM 100-5 (Lock-Pullan, 2003). Lock-Pullan (2003) asserts that the lessons of the war focused on materiel considerations, including the M1 Abrams Tank.

Bronfeld (2007) agreed with the focus on weaponry: "DePuy's analysis of the Yom Kippur War strengthened the case that Abrams had made in his battle to get funding for his 'big five' weapons" (p. 489). These "big five" systems were the M1 Tank, Bradley Infantry Fighting Vehicle, the Blackhawk helicopter, the Apache helicopter, and the Patriot Air Defense System (Bronfeld, 2007). Starry also took lessons from the Yom Kippur War and continued to support technology investments and directed the updating of FM 100-5, which culminated in the AirLand Battle concept (Bronfeld, 2007).

Emerging technology was also in the forefront of thought during the 1970s and in this RMA. Adamsky (2008) also discusses the RMA and the need for new technology. This technology in the form of "microprocessors, computers, lasers, and electronics, had enabled the production of so-called smart weapons" that would allow for accurate deep strikes and facilitate the move to the AirLand Battle concept (Adamsky, 2008). Tomes (2012) echoed Adamsky,

specifically discussing the now named Second Offset in his article. Tomes wrote that this "'offset strategy' led to major improvements in stealth, precision strike, battlefield information and communication systems, intelligence systems, positioning and navigation capabilities, and training" (p. 303). These technologies were developed to counter and offset the Warsaw Pact's advantage in Europe (Tomes, 2012). Tomes, in agreement with Bronfeld (2007) and Lock-Pullan (2003), mentioned that DePuy saw the coming of this technology and worked to adjust doctrine. Tomes' article, however, gave more context on Secretary Brown's offset initiative. Tomes described the purpose of the offset and how the United States would overcome the Soviets strengths with these technologies and deep strikes at Warsaw Pact forces. Tomes said that Secretary Brown helped to shape technology investments.

Tomes (2012) did agree that defense strategy was not all about technology. Tomes wrote, "Technology was only part of the story. Military leaders embraced organizational innovation in the late 1970s" (p. 307). However, Tomes did not discuss in detail the TRADOC's thinking on doctrine that eventually led to the employment of deep strike concepts in AirLand Battle. Tomes was clear, however, about linking a successful offset strategy back to DePuy's vision and RMA. Tomes wrote, "In short, it would require an RMA. But if the 'offset strategy' worked, DePuy's vision would be realized—NATO would find, hit, and eliminate Russian forces before they overwhelmed the defensive line" (p. 305).

Tomes (2012) also made clear that the offset strategy did not have a formal program name. He briefly discussed the key enablers, such as Defense Advanced Research Projects Agency programs. In addition, Tomes discussed how the concept demonstration known as "Assault Breaker" helped prove offset developments. Assault Breaker began to test key aspects of the offset in "a multi-faceted effort combining sensors, weapons systems, weapon platforms,

and information processing tools" (Tomes, 2012, p. 306). Tomes gave evidence that a crucial part of Assault Breaker also tested a concept. Though not specifically mentioned by name, that concept was AirLand Battle. Tomes noted that a key aspect was to get the services to cooperate and that TRADOC and the Air Force Tactical Command facilitated this cooperation.

Another valuable resource was Skinner's (1988) historical report on *Airland* [*sic*] *Battle Doctrine*. Issued by the Center for Naval Analyses, the report was written to inform naval strategy and Marine doctrine development by using AirLand Battle as a historical "point of reference" (Skinner, 1988, p. 1). Skinner echoed other authors by agreeing that AirLand Battle was a doctrine that recognized the "future role of sophisticated technology as a key element in the modern approach to battle" (p. 1). In line with other sources, Skinner also acknowledged that this operational concept focused on a Warsaw Pact/NATO encounter in Europe.

Skinner's (1988) account also briefly discussed the Army's realization of the need for change after Vietnam and its evolution in thinking, including DePuy's version of FM 100-5. Included in this need to change was the Army's renewed interest in Europe after Vietnam (Skinner, 1988). Skinner's report discussed Starry's continued evolution of doctrine after he took command of TRADOC and the need for the United States to compete with second wave Soviet forces. Skinner's work went on to discuss in great detail the evolution of AirLand Battle and its application to the Marines and Navy.

Conclusion

This review of literature for the most part shows an Army undergoing change. Although each work reviewed generally had a different focus, the literature supports the concept of purposeful change. Each work had a slightly different focus and main thesis; however, the literature seems to indicate that the senior Army leaders and TRADOC took a disciplined

approach to meet a formidable threat in Europe and that it pursued innovation in operational concepts and in technology/acquisition plans. However, because each work has a different focus, there is an opportunity to synthesize the history during this time period. This synthesis showed key developments and context for this time period that the authors of the Third Offset can draw upon.

The research methodology section discusses the utility of the sources described in the literature review.

Chapter 3 – Research Methodology

Research Hypothesis

The hypothesis for this paper is that the 1970s and early 1980s senior Army leaders had a picture of the likely strategic environment that enabled them to develop an operational concept with associated doctrine and to make complementary technology/acquisition investments. Leaders worked to understand how the technology/acquisition investments could complement its operational concept and doctrine and to ensure that these investments would prove successful in meeting the threat. There was a role to play for a new operational concept and technology/acquisition innovation in the Second Offset. However, it was the TRADOC's understanding of strategic environment (threat, direction of technology, etc.) that allowed it to design the concept and doctrine to meet the threat and then allowed the Army to make the necessary technology/acquisition investments. A critical assumption of this paper is that the Army's activities were successful in designing an effective force, and this effectiveness was demonstrated on the battlefield in 1991.

Research Design

This study attempted to synthesize the existing literature detailing activities surrounding the Second Offset. A standard historical method was used to answer the general question of this paper. As such, the evidence used for analysis was limited primary sources from the relevant time period and secondary sources that have already analyzed this time period. The primary sources consist of reports, memos, speeches, and correspondence from key participants. This study attempts to integrate the various key source documents into a coherent depiction of the events described and to synthesize the various key aspects of the story. Putting the events of the

1970s and early 1980s into a synthetic whole and providing some context on this past offset should allow readers to draw lessons for today's Army.

The method of presentation showed the logical evolution of technological investments, acquisition plans, strategy, operational concept, and doctrine development. The results were presented in a linear narrative with corresponding analysis. This allows readers to see the evolution through the thought and actions of institutions and key players.

It is the author's contention that history can serve as a frame of reference for decision makers. Understanding history can help one make better analogies from past events. It is important to understand the proper context of past events in order to make accurate or strong analogies. Brands and Suri (2015) engage in a sustained dialogue concerning history and analogies in their book *The Power of the Past.* Although their book was written to address foreign policy and history, its insights can be applied to other areas of policy and history. Brands and Suri address the pitfall of using historical analogies, but do point to the value of properly informed historical analogies:

> …analogies have influenced policy in beneficial as well as pernicious ways.
>
> This point touches on a fundamental reality about historical analogies. Although the uncritical or selective deployment of analogies is obviously fraught with peril, a more discerning use can be quite illuminating. Carefully employed, analogies can help spark the intellectual curiosity that leads to sharper, textured interpretations of complex situations, integrating attention to details with insight about the relationship of different actors and events…

> The key here is to understand that analogies should serve as the beginning of an inquiry into the continuities between past and present, rather than an end to such analysis. (p. 13)

The important point is that this study should help the reader make informed analogies as one factor in his or her actions on devising Third Offset technology investments, acquisition plans, and operational concept development. Brands and Suri (2015) have noted that policy makers are naturally drawn to analogies and history as they try to use the past to provide context for the present. In fact, one purpose of Brands and Suri's book is to update the best known book on history and policy for government decision makers, Neustadt and May's (1986) *Thinking in Time*.

Bias and Error

The use of primary sources as evidence is key to placing the events described in proper context and for readers to then draw lessons that can inform the Army's role in the Third Offset. However, easy accessible primary sources were limited. Secondary sources are analyzed and synthesized to complement the primary evidence and aid in the discussion and analysis of the topic. Internal validity was strengthened by the author's attempt to use different sources to verify the events described. Reliability was enhanced by confirmability of the primary and secondary sources. Primary sources were documented, and the reader will have the ability to access the documents through the cited location.

The author attempted to guard against bias and error. However, a weakness of this study is that time and funding did not allow the author to undertake original archival research. Archival work is the gold standard for historical research. Although some primary sources are online, they do not represent the full range of documents that would show the complete picture of key actions

and decisions during this era. Consequently, the author had to rely upon those documents he could find online or in a library research database. The online sources and research database sources the author found were heavily used by the scholars cited in the literature review. Therefore, there is no major discovery of sources, and the author will try to guard against letting previous scholars' primary source selection bias his interpretation. In addition, some of the primary sources used edited compilations of key players, such as DePuy's and Starry's papers. The use of compiled sources does not allow the author to independently validate whether these sources are free of errors. Therefore, secondary sources detailing the history on the Army during this time period were the primary basis for analysis.

Chapter 4 – Findings

Collected Data

A key finding of the literature cited in Chapter 2 is that senior Army leaders recognized that the Army needed to change coming out of the Vietnam War, used the 1970s to learn and develop that change, and then were able to integrate the Army's technology investments/acquisitions to complement new doctrine. Although there was a Department of Defense effort to use technology as a force multiplier to offset the Soviets, the senior Army leaders including the CSA and TRADOC had already realized this need by the time Secretary Harold Brown and Undersecretary Perry undertook this effort in the late 1970s. The Army was able to complement Brown's effort due to the doctrinal changes and investments already made.

The Table 1 shows a comparative overview of the key factors highlighted in the secondary literature by each secondary source author.

Table 1 – Crosswalk of Key Sources and Historical Influences

Author	RMA	Rebuild	Strategic Environment	Yom Kippur War	Concept/Doctrine	Technology or Acquisition
Adamsky	X		X			X
Bronfeld				X	X	X
Lock-Pullan		X	X	X	X	X
Palmer	X		X			
Tomes					X	X
Skinner					X	X

Analysis

The cited sources in Chapter 2 of this paper for the most part show a consistent pattern. Although each work generally had a different focus, the literature supports the thesis of the paper. Most importantly, the sources show that the Army knew that it needed to change as the

Vietnam War came to an end. The Army knew that it needed to rebuild and that it needed to focus on the primary threat in Europe from the Warsaw Pact. The Army deliberately shifted its focus to this European threat and tried to devise a strategy to meet this threat.

As TRADOC developed doctrine to meet the threat in Europe, DePuy and Starry drew on the lessons of the Yom Kippur War. This is evident in the official documents that DePuy's TRADOC produced in the 1970s. An example is DePuy's memorandum to CSA Abrams in January 1974:

> You asked TRADOC to analyze the Arab-Israeli War from the standpoint of the interests of the United States Army. There are three major areas of interest. The first, and the one on which we are well embarked, has to do with the lessons learned as they affect tactics, techniques, organization, training and equipment performance. The second has to do with information that may affect our decision on weapon systems acquisitions… (Swain, Gilmore, & Conway, 1994, p. 69).

The lessons of this war gave TRADOC specifics to draw from and helped TRADOC conceptualize the fight that might take place in Europe. DePuy wrote in a letter to CSA Weyand in 1976 concerning FM 100-5, "Then, in 1973, the Arabs attacked Israel…This was the first large confrontation between two forces equipped with modern weapons representative of those found in the hands of NATO and the Warsaw Pact" (Swain et al., 1994, p. 179). DePuy said that TRADOC's analysis "is incorporated in FM 100-5" (Swain et al., 1994, p. 181). Even after DePuy FM 100-5 was published, TRADOC continued its investment in thinking about what war might be like against the Soviet forces. The cited literature shows that a key aspect of this thought was the role that technology would play in this battlefield and how that technology could be employed to give the United States Army the advantage over the Soviets. Even before

Secretary Brown's offset initiatives, TRADOC already understood that technology would play a large role in the success of future battles. The "Big Five' were already being advocated by the Army as the offset initiative was announced, and the Army was already thinking about technology on the battlefield, including precision guided munitions. The Army did embrace the idea of the need for technology; however, it importantly continued to work on its operational doctrine culminating in AirLand Battle. The Army did invest in the additional technology that would aid this doctrine and helped to prove it out in the Assault Breaker exercise.

The aggregate of the literature shows that a link existed between operational concepts and technology. The literature shows that technology should be linked with an effective strategy and operational concepts. Each source had a slightly different focus and main thesis; however, the literature indicates that the Army through the work of TRADOC took a disciplined approach to meet a formidable threat in Europe and that it pursued innovation in operational concepts and technology/acquisition plans.

In other terms, the strategic environment was properly understood along with concepts, doctrine, and guided technology/acquisition investments. TRADOC worked to understand how its technology/acquisition investments complemented its operational concepts and doctrine and to ensure that these investments would prove successful in meeting the threat. In the Second Offset, there was a role to play for concepts (devised to meet the strategic environment) as well as for technology/acquisition innovation. However, it was the Army's understanding of the strategic environment (threat, direction of technology, etc.) that allowed it to design concepts and doctrine to meet the threat and that allowed the Army to make the necessary technology/acquisition investments. In fact, technology/acquisition investments were in part

shaped by the TRADOC's understanding of the strategic environment and the concepts/doctrine designed to respond to this environment.

In support of much of the secondary literature, current and DoD leaders have suggested that technology alone is not enough to outmatch an adversary. In testimony to the Senate Subcommittee on Emerging Threats and Capabilities, Assistant Secretary of Defense for Research and Engineering Stephen Welby (2016) agreed that technology is not enough for an offset. In describing the First and Second Offset, Welby said, "It is important to note that neither of these two original offset strategies was solely about technological advantage. In each case, it was the right combination of technology-enabled operational and organizational innovation that provided decisive strategic and operational advantage and therefore bolstered conventional deterrence" (p. 4). Welby also said that both "technological and operational innovations" are needed to offset an adversary (p. 2) and that this innovation "will be key to future strategy" (p. 3).

Welby (2016) discussed the history of the effort to offset the Soviets in Europe. He said, "These offset strategies relied on the fundamental innovation in technology, operational approaches, and organizational structure to compensate for Soviet advantage in time, space, and force size" (p. 4). The Second Offset history cited in this paper demonstrates that the Army leaders not only worked to develop technological solutions, but developed the operational concepts and the doctrine to use these technological solutions. Welby further noted that:

> The Second Offset Strategy…sought to create an enduring advantage by pursuing a new approach to joint operations—leveraging the combined effects of conventional precision weapons, real-time long-range ISR sensor capabilities capable of supporting real time

> precision targeting, and the joint battle networks that permitted these capabilities to be synchronized and executed over the full breadth of the battlespace. (p. 4)

AirLand Battle was the doctrine enabling the use of the technological solutions; it allowed for the battle "over the full breadth of the battlespace" (Welby, 2016, p.4).

Welby's (2016) written statement echoed those made in the late 1970s by Under Secretary of Defense Perry who led DoD research and engineering. In his first statement to Congress, Perry discussed how the United States "must put a greater emphasis on our strongest advantage over the Soviet Union—our technology" (DoD, 1978, p. I-5). However, later in his statement, Perry indicated that technology is not the complete answer:

> There are two essential steps in improving the use we make of our technological and productive assets. First, technology and production are not ends in themselves. Instead, they are means to objectives defined by military doctrine, strategies, tactics, roles and missions, as well as by other significant elements of national policy. Therefore, we must understand better the inter-relationships among these factors and our technology. (DoD, 1978, p. II-25)

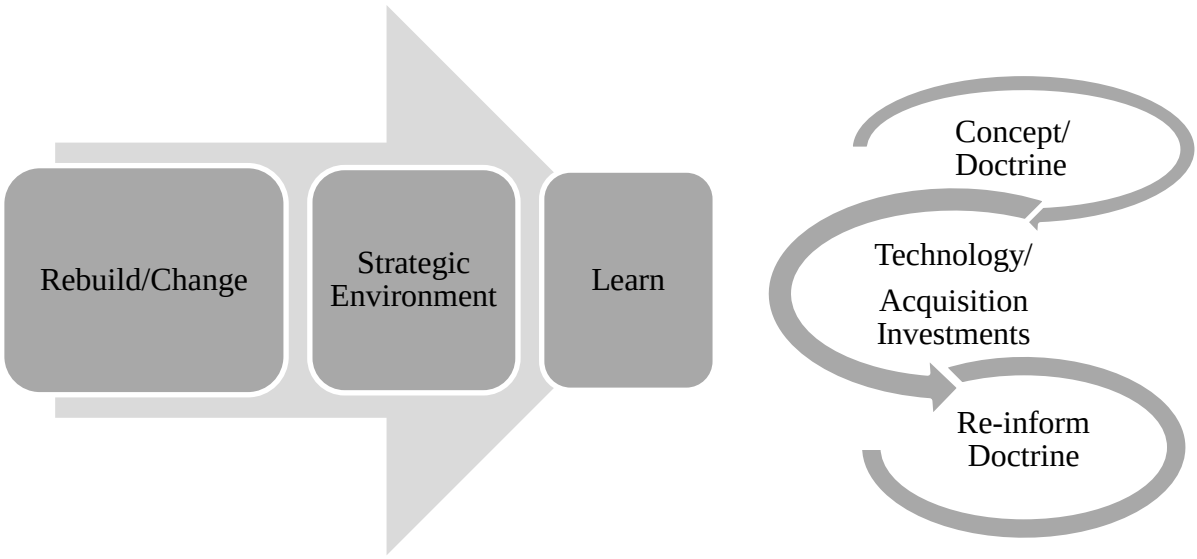

Figure 1 – Interpretive Model of the Second Offset

The Figure 1 model was developed by the author to depict the progression of the Second Offset era as found in the cited literature. It visually depicts the synthesis of the literature used in this paper. It can be used to chart the progress of the Army from the end of the Vietnam War through AirLand Battle. The first block represents the Army realizing that it needs to rebuild or change. The second block represents the Army looking for a strategy or mission vision. The third block represents learning on the part of the Army through analysis, research, and other means. Finally, based upon the learning, the Army tries to devise an operational concept and doctrine coupled with its ability to exploit the latest technology or equipment. Technology and equipment investments inform concepts and doctrine in a continuous reinforcement mechanism.

The secondary literature used in this paper and selected primary research show a logical progression. From the need to rebuild to doctrine, there were key events or steps in this progression. The key to Second Offset history is that the operational concept was as important as key technology.

Chapter 5 – Interpretation

The hypothesis for this paper was that the Army leaders, including the CSA and TRADOC CGs, had a clear understanding of the likely strategic environment, which enabled it to develop an operational concept with associated doctrine and to make complementary technology and acquisition investments. The hypothesis was supported by an aggregate of historical evidence, showing that these leaders knew they needed institutional change as the Vietnam War came to an end. These leaders knew that they needed to rebuild and focus on the primary threat in Europe from the Warsaw Pact. There was a deliberate shift in focus to the European threat, and leaders tried to devise a strategy to meet this threat. Included in this effort was development of an operational concept with associated doctrine to meet the Soviet threat. This concept and doctrine were informed by the lessons of the Yom Kippur War. Associated technology investments were in motion during this time and were adopted to support TRADOC's ultimate doctrine of AirLand Battle. The hypothesis was supported by both secondary sources and limited primary sources. As an aggregate, the research showed that Army leaders followed the model outlined in this paper.

Conclusions

History can sometimes be used as a guide as decision makers try to understand the context of a given situation. As DoD leaders and the CSA try to chart the course for the Third Offset, it might be instructive for them to understand the history of the Second Offset. This history shows that the Second Offset was more than just technology. In fact, technology and acquisition programs were just part of the change in the 1970s and early 1980s. It was strategy, concepts, and doctrine, combined with technology and acquisition that built the U.S. ground

forces that defeated Saddam Hussein in 1991, using the concepts and doctrine developed to defeat the Soviets in Europe.

Secretary of Defense Harold Brown and Undersecretary Perry did emphasize technology programs under the administration of Jimmy Carter. However, TRADOC leaders and successive CSA had already charted a course for the change. Revealing is a comment by Donn Starry on the "Perry Initiative" (Sorley, 2009, p. 657). In a message to Army Deputy Chief of Staff for Research, Development and Acquisition LTG David Keith, Starry commented:

> I would first like to allay your fears that we are charging off on some wild goose chase which will in the end cost you money or cause some ongoing program to lose out in favor of some new and exotic enterprise…
>
> I am responding to Bill Perry in this wise, first because he alleged that we are all dragging our feet and that he has not yet found anyone in the Army who would rise to his challenge. Secondly, it is quite clear that the RDTE strategy of the DOD is marching to his tune—pursuing a course of action that I'm not at all certain is the way to go, without a single military voice being raised in assent or dissent. I object to that—so should you. Third, he has lots of money; he will spend it for whatever suits his personal convictions regarding our RDTE strategy—no matter that it's the way to go or not. Therefore, given that the money will be spent anyway, why shouldn't we try to steer at least some of it into programs of our own designing? In addition why can't we, by joining up with him, try to steer what he already has started into useful and productive channels? If we don't, we'll just get another box of complicated junque that we can't train anyone to use (Sorley, 2009, p. 657).

From this interchange, it is clear that Starry did not see Perry's announcement to Congress on technology investment as a momentous occasion. In fact, successive CSAs, DePuy, and Starry had already recognized that concepts and technology investments should be in alignment. And it is the history surrounding those elements (strategic aims, operational concepts development, and technology/acquisition investments) that might serve as a guide as the Army undertakes the Third Offset.

Recommendations

The CSA is at the same place as leaders in the 1970s. There are some parallels. The Army has ended one major engagement in Iraq and is trying to unwind another major engagement in Afghanistan. There is a perceived strategic threat in the rise of the Chinese military and a resurgence of Russia. There have been two major engagements fought by Russia that may portend the future of warfare. Just as with the Yom Kippur War, the CSA, the Army staff, TRADOC, and the acquisition community have the opportunity to study the engagements in Georgia and Ukraine to help decipher what the next war may look like. From these engagements and other pertinent world events, such as cyberattacks, the Army may be able to learn and improve upon or validate its concept of the fight. TRADOC has the opportunity to review doctrine in light of Russia's engagements and likely cyberattacks as it writes doctrine. In addition to likely trends in scientific advancement, technology and acquisition investments can be made based on the future perceived threats and the doctrine that will be used to counter these threats.

Army leaders will have to decide whether history provides an apt analogy. It could be that the advancement of science and technology will be such that an accurate assessment cannot be made about the future threat environment. Army operational and scientific leaders may see

what Russia did in Georgia and Ukraine as already obsolete or see that technologies such as drones and artificial intelligence are revolutionary changes in the nature of warfare that make the model in this paper obsolete. Whatever it may be, it is still important for leaders to understand the successes that were touted as the Second Offset were not based on technology programs alone.

This study presented a high-level overview of Army leader strategies in the 1970s and into the early 1980s. It looked primarily through the lens of the CSA and TRADOC leaders. There is ample opportunity for additional researchers to look at this era through the lens of acquisition community leaders and how they interacted with TRADOC. Further research can be undertaken not only at the leadership level, but at the level of individual technology and acquisition programs in the 1970s. Additional research can be conducted on the specific technologies, such as precision-guided munitions. There are also plenty of research possibilities in looking at DoD-level investment strategies during this era, including the Long Range Research and Development planning program. Finally, the organizational and personnel changes made in the Army in the 1970s offer a potentially fruitful area of study.

Limitations of the Study

The primary limitation of this study is that the researcher was unable to undertake detailed archival research to develop additional primary sources for this report. Because of the lack of archival research, this paper relies heavily on secondary historical works, along with some primary source material. Based on the sources used, the research focuses heavily on the actions of TRADOC to influence the Army in the 1970s and early 1980s. Additional archival research from the acquisition community would have provided a more holistic view of this critical time period.

References

Adamsky, D. P. (2008). Through the looking glass: The Soviet military-technical revolution and the American revolution in military affairs. *Journal of Strategic Studies*, *31*(2), 257–294. doi:10.1080/01402390801940443

Brands, H., & Suri, J. (2016). Introduction: Thinking about history and foreign policy. In H. Brands & J. Suri (Eds.), *The power of the past: History and statecraft* (pp. 1–24). Washington, DC: Brookings Institution Press.

Bronfeld, S. (2007). Fighting outnumbered: The impact of the Yom Kippur War on the U.S. Army. *Journal of Military History*, *71*(2), 465–498.

Department of Defense. (1978). *The FY 1979 Department of Defense Program For Research, Development, and Acquisition*. Washington, DC: Author. Retrieved from http://www.dtic.mil/dtic/tr/fulltext/u2/a050350.pdf

Hagel, C. T. (2014a). *The defense innovation initiative* [Memorandum]. Washington, DC: Department of Defense. Retrieved from http://www.defense.gov/Portals/1 /Documents/pubs/OSD013411-14.pdf

Hagel, C. T. (2014b). *Reagan National Defense Forum Keynote*. Presented at Reagan Presidential Library, Simi Valley, CA. Retrieved from http://www.defense.gov/News /Speeches/Speech-View/Article/606635/reagan-national-defense-forum-keynote

Lock-Pullan, R. (2003). 'An inward-looking time': The United States Army, 1973–1976. *Journal of Military History*, *67*(2), 483–511.

Neustadt, R. E., & May, E. R. (1986). *Thinking in time*. New York, NY: The Free Press.

Palmer, D. R. (2014). The NATO-Warsaw Pact competition in the 1970s and 1980s: A revolution in military affairs in the making or the end of a strategic age? *Cold War History, 14*(4), 533–573. doi:10.1080/14682745.2014.950250

Skinner, D. W. (1988). *Airland battle doctrine* (Professional Paper 463). Alexandria, VA: Center for Naval Analyses. Retrieved from http://www.dtic.mil/dtic/tr/fulltext/u2/a202888.pdf

Sorley, L. (Ed.). (2009). *Press on! Selected works of General Donn A. Starry* (Vol. 1). Fort Leavenworth, KS: Combat Studies Institute Press. Retrieved from http://www.dtic.mil/dtic/tr/fulltext/u2/a507478.pdf

Swain, R. M., Gilmore, D. L., Conway, C. D. (Eds.). (1994). *Selected papers of General William E. DePuy: First commander, U.S. Army, Training and Doctrine Command, 1 July 1973*. Fort Leavenworth, KS: Combat Studies Institute. Retrieved from http://usacac.army.mil/cac2/cgsc/carl/download/csipubs/SelectedPapersofGeneralWilliamDepuy.pdf

Tomes, R. R. (2012). An historical review of US defense strategy from Vietnam to Operation Iraqi Freedom. *Defense & Security Analysis, 28*(4), 303–315. doi:10.1080/14751798.2012.730722

Welby, Stephen P. (2016). *Third Offset Technology Strategy* [Prepared Statement]. Washington, DC: Department of Defense. Retrieved from http://www.armed-services.senate.gov/imo/media/doc/Welby_04-12-16.pdf

Glossary of Acronyms and Terms

CECOM .....U.S. Army Communications-Electronics Command

CSA.....Chief of Staff of the Army

CG.....commanding general

DAU.....Defense Acquisition University

DoD.....Department of Defense

ILSC.....Integrated Logistics Support Center

RDTE.....research, development, test and evaluation

RMA .....Revolution in Military Affairs

TRADOC.....U.S. Army Training and Doctrine Command

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